S/M No : AKR0108EF0

Service Manual

Car Audio

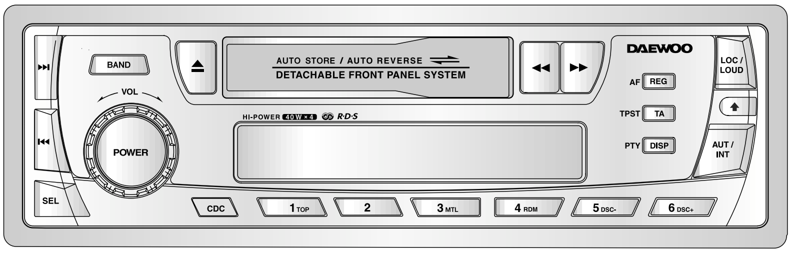
MODEL : AKR-0108 Series

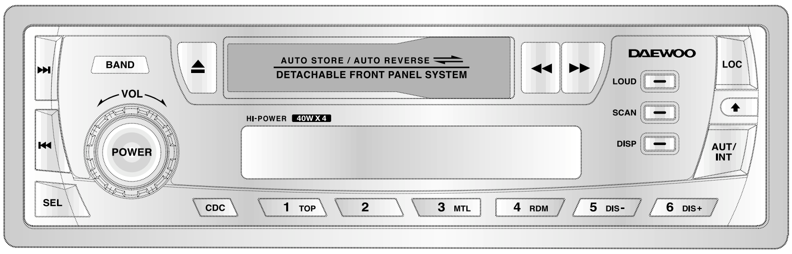
■ **0106 Series**

- **AKR-0106A**

■ **1010 Series**

- **AKR-1010RC**
- **ACR-1010RC**
- **AKR-1010RDS**
- **AKR-1010C**
- **AKR-1010**





- 4-Channel high Power (40W x 4Ch)
- Electronic Tuning
- Electronic Volume/Bass/Treble/Balance/Fader Control
- 42 Memory Capability (18FM+12MW+12LW)
- Local/DX Switch
- Loudness Control
- Mechanical cassette Player
- Detachable Face for Anti-Theft
- 10 CD-changer control (option)

DAEWOO ELECTRONICS CO., LTD

http://svc.dwe.co.kr Mar. 2001

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1. PRODUCT SPECIFICATIONS

☞ AUDIO SECTION

Maximum output power	: 40watts per channel into 4 ohms.
Load impedance	: 4 ohms or 8 ohms
Total harmonic distortion	: Less than 10% at 12 watts
Frequency response	: 100Hz(± 3dB), 10kHz(-5 ± 3dB)
Control Bass/Treble	: 10 ± 3dB at 100Hz/10kHz

☞ TAPE SECTION

Track format	: 2-track / 2-channel system
Tape speed	: 4.75cm/sec
Wow / Flutter	: 0.35%max. (WRMS)
Frequency response	: 63Hz ~ 10kHz (±3dB) normal (LH)tape
Signal to noise ratio	: 50dB
Channel separation	: 35dB

☞ TUNER SECTION

(FM)	Tuning range	: 87.5 to 108MHz
	Sensitivity	: 12dBuV
	Stereo separation	: 30dB
	Signal to noise ratio	: 55dB
	Frequency range	: 87.5 ~ 108MHzII
	Channel space	: 50KHz at Europe
(MW)	Tuning range	: 522 to 1620kHz at Europe (530 to 1710KHz at U.S.A)
	Sensitivity	: 30dBuV
	Signal to noise ratio	: 50dB
	Frequency range	: 522 ~ 1620KHz
	Channel space	: 9KHz
(LW)	Tuning range	: 144 to 288KHz
	Usable Sensitivity	: 40dBuV

☞ GENERAL

Power requirements	: DC 13.8V (10.8 ~15.6V allowable) Negative ground
Spdaker impedance	: 4 or 8 ohm
Output power	: Maximum 40Wx4Ch.
Current consumption	: 10A
Dimension (W x H x D)	: 178 x 50 x 156 mm
Chassis size	: 195 x 64 x 14.6 mm
Weight(Net)	: 1.75Kg

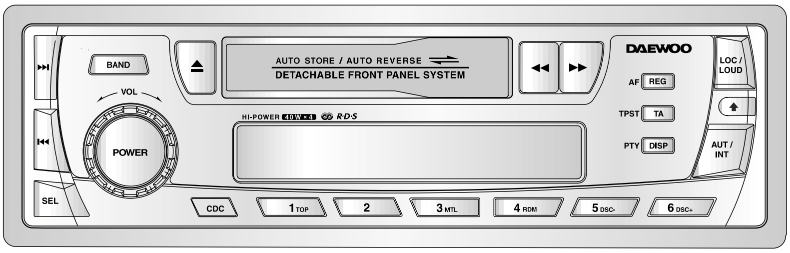
Design and specifications are subject to changes for improvements without notice.

2. LINE DRAWING

2-1. FRONT SIDE

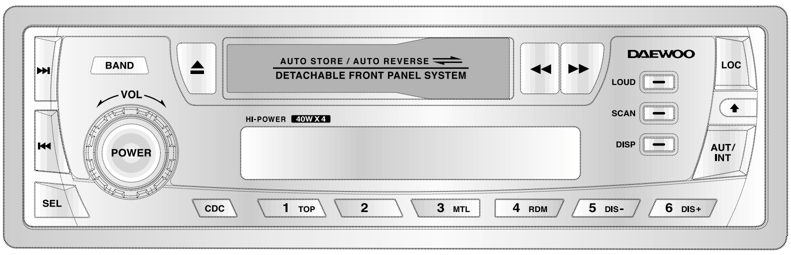
■ AKR-1010RC

- RDS Function
- 4-Channel high Power (40W x 4Ch)
- Electronic Tuning
- Electronic Volume /Bass /Treble /Balance /Fader Control
- 42 Memory Capability (18FM+12MW+12LW)
- Local/DX Switch
- Loudness Control
- Mechanical cassette Player
- Detachable Face for Anti-Theft
- 10 CD-changer control

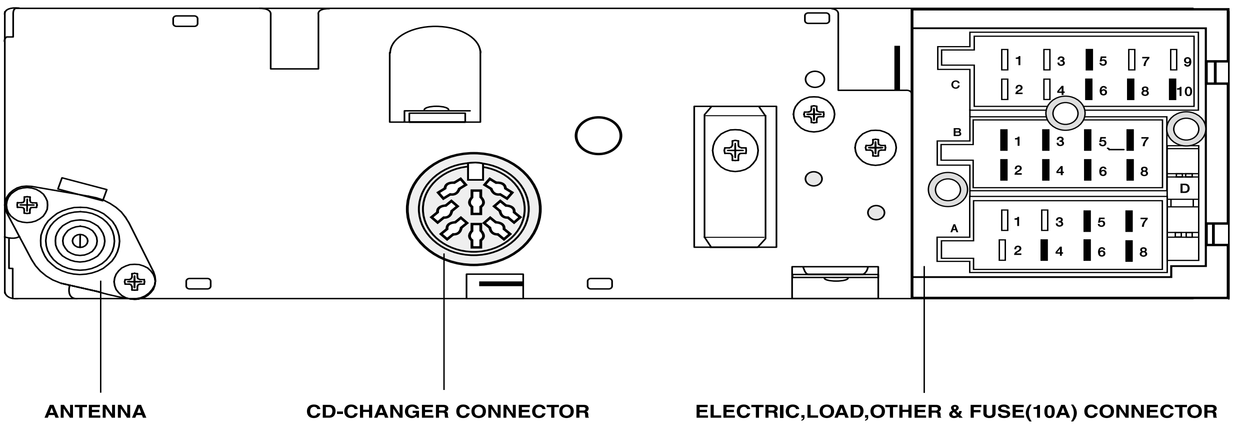


■ AKR-1010C ■ AKR-0106A

- Basic Function
- 4-Channel high Power (40W x 4Ch)
- Electronic Tuning
- Electronic Volume /Bass /Treble /Balance /Fader Control
- 42 Memory Capability (18FM+12MW+12LW)
- Local/DX Switch
- Loudness Control
- Mechanical cassette Player
- Detachable Face for Anti-Theft
- 10 CD-changer control



2-2. REAR SIDE

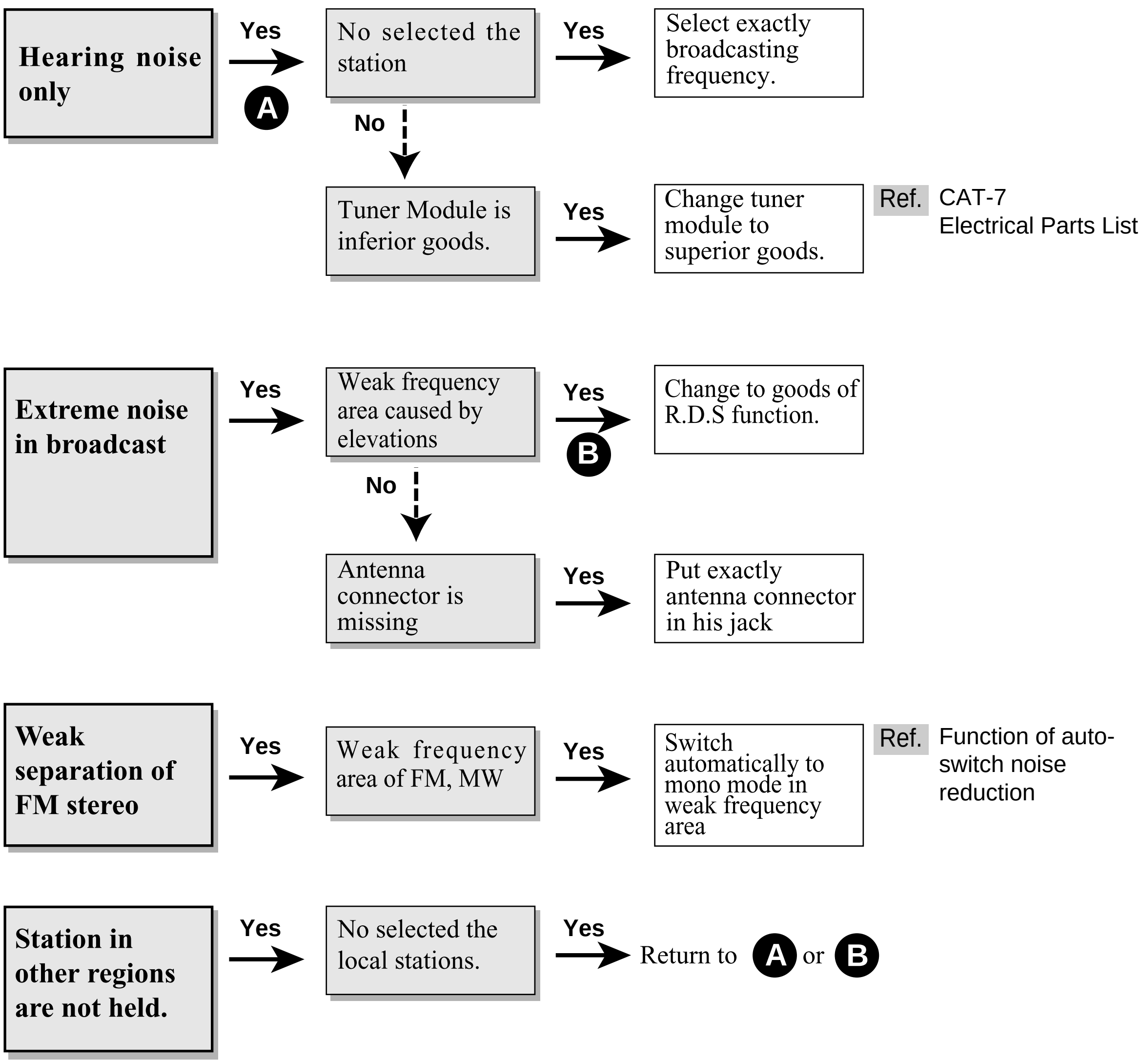


3. EMERGENCY TROUBLE SHOOT

3-1. General Function

Symptom	Check (Yes →; No ↓ next check)	Yes →	Ref.
No sound from speakers (A)	Output connector is missing	Put exactly output connector in.	
	Output connector is inferior goods	Change output connector to superior goods	
	Power IC, Output Socket is inferior goods	Change Power IC, Output Socket to superior goods	
Different each channel have output level (Front, Rear, Left, Right)	Balance of front and rear is in one side	Re-adjust Balance of front, rear	Balance = Center Front / Rear
	Balance of Left, Right is in one side.	Re-adjust Balance of Left, Right	Balance = Center Left / Right
Treble or Bass is low unusually	Balance of Treble or Bass is in one side.	Re-adjust Balance of Treble or Bass	Balance = Center Treble / Bass
L.C.D or Lamp is not turned off.	Power is not supplied	Return to (A)	
	Output voltage of power IC is little.	Change Regulator IC and check output voltage.	Regulator IC output Voltage = V
	LCD or Lamp is inferior goods.	Change LCD or Lamp to superior goods.	Electrical Parts List L.C.D., Lamp

3-2. Tuner Function



R1 In case of located Glass Antenna, check if heat wire is cut or not in rear window.

R2 Check Antenna connector part.

3-3. Tape Function

No sound from speakers (A)

- Yes → Tape is inferior goods
  - Yes → Use only superior goods
  - No → No signal play output
    - Yes → Put exactly deck output connector in.
    - No → Deck Mechanism is inferior goods.
      - Yes → Change Deck Mechanism to superior goods.
      - Ref. Tape Deck Macha ADC-2385

Tape is not inserted into the slot.

- Yes → Tape was inserted right side left.
  - Yes → Insert recording part to right side.
  - No → Tape is ejected after being inserted.
    - Yes → Return to (A)
    - Ref. Tape is cut or extended

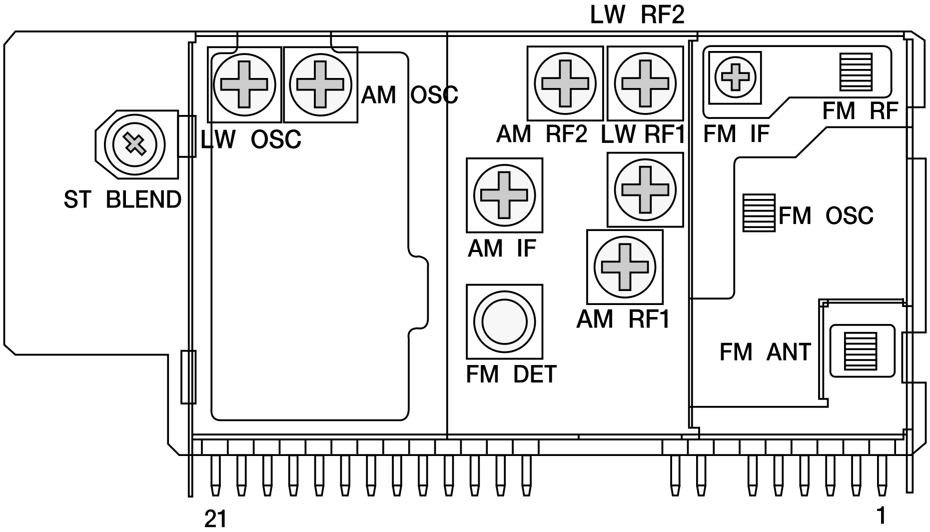
Sound is low or not clear

- Yes → Head is dirty
  - Yes → Clean head or pinch roller with cleaner

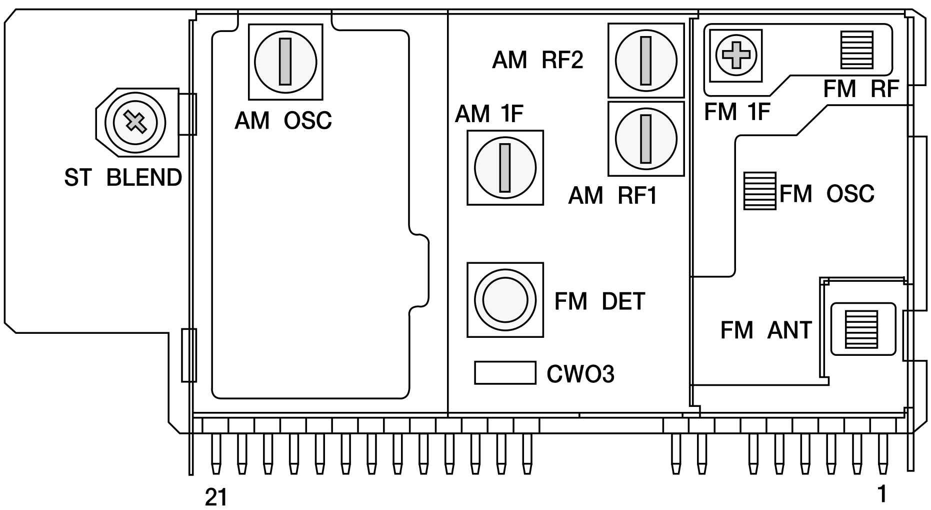
4. ADJUSTMENTS

4-1. TUNER MODULE ADJUSTMENT LOCATIONS

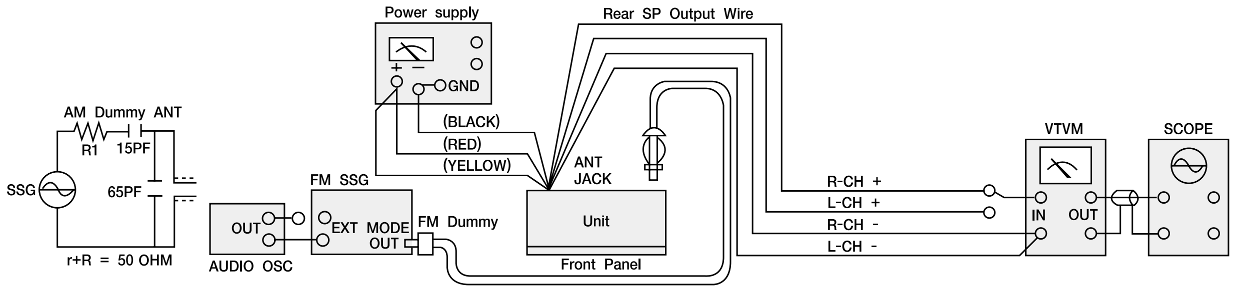
▪ CAT-7 (3 Band)



▪ CAT-6 (2 Band)

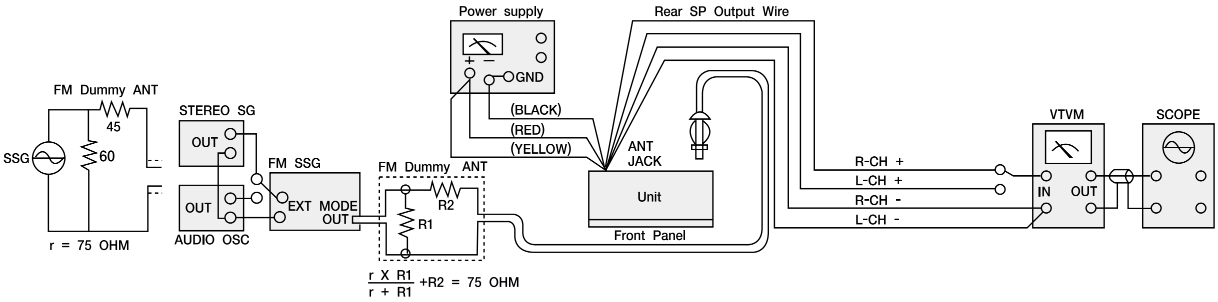


4-2. MW / LW ADJUSTMENT METHOD



STEP	ALIGNMENT	TUNING	TEST POSITION	SSG FREQUENCY	ALIGNMENT	INDICATOR
MW	Band Covering Range	522 KHz	V.T point of AM Board	522 KHz	AMOSC	MAXIMUM
		1620 KHz		1620 KHz	-	7.6V
	IF	522 KHz	Output	450 KHz	AMIF	MAXIMUM
	TRACKING	603 KHz	Output	603 KHz	AMRF1 AMRF2	MAXIMUM
		1404 KHz	Output	1404 KHz	AMRF1 AMRF2	MAXIMUM
LW	Band Covering Range	144 KHz		144 KHz	LWOSC	MAXIMUM
	TRACKING	220 KHz	Output	220 KHz	LMRF1 LMRF2	MAXIMUM

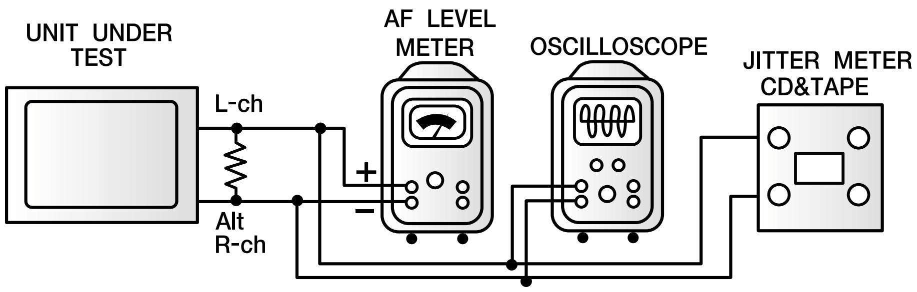
4-3. FM ADJUSTMENT METHOD



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST POINT	ADJUSTMENT
		FROM	TO			
1	IF adjust	98.1 MHz, ANT input 60dBu, 1kHz (30% MOD) FM SSG	ANT jack and GND	The voltage between CW03	FM DET	Adjust for 0V± 0.05V
2	MPX IC Separation Control	98.1 MHz, ANT input 40dBu, 1kHz (L+R=45% L-R=45% PILOT=10% MOD)	ANT jack and GND	L or R CH SP. output wire VTVM and Scope	ST BLEND	L, R separation 8dB

4-4. TAPE ADJUSTMENT METHOD

NOTE : 1. Clean the playback head before adjustment
2. Prepare the test tape MTT-114 or equivalent
3. Balance, Fader, Bass & Treble ....Center position. Volume adjusted to 2Volts.



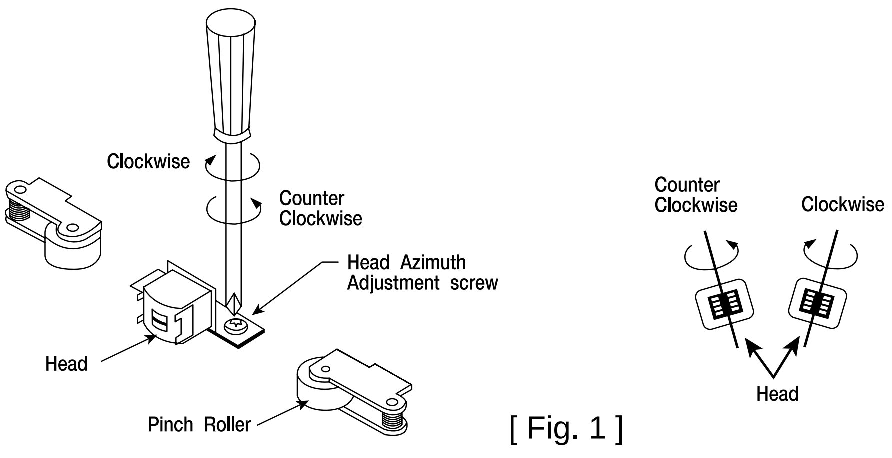
STEP	DESCRIPTION	TEST TAPE	TEST POINT	ADJUSTMENT POINT	ADJUSTMENT
1	Head azimuth adjustment	MTT-114N or equivalent	Speaker Output	Head azimuth adjustment screw (Fig. 1)	Turn the azimuth screw to obtain maximum level
2	Tape Speed	MTT-114N or equivalent	Speaker Output	Tape Speed adjustment (Fig. 1)	Adjust for 3010-3020Hz

Note :

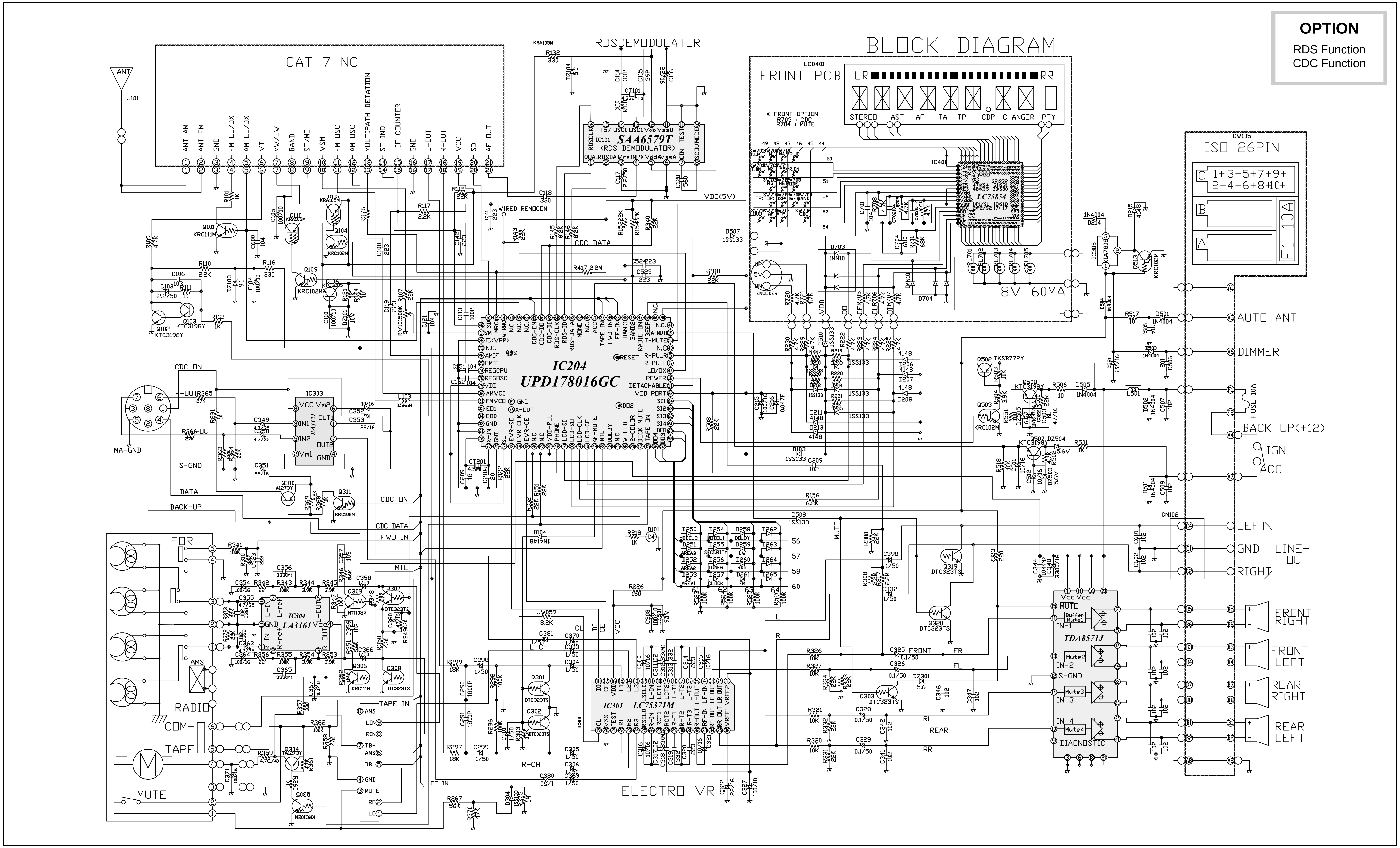
dBu	uV	dBu	uV
17	5.0	33	44.6
16	6.31	35	56.2
30	31.6	45	178

NOTE : Antenna signal is used.

1. For Signal Generator with readings in EMF(Open type) add 12dB (6dB for the "Dummy" and 6dB for EMF-reading).
2. For Signal Generator with reading in dBm add 6 dB for "Dummy"



[Fig. 1]

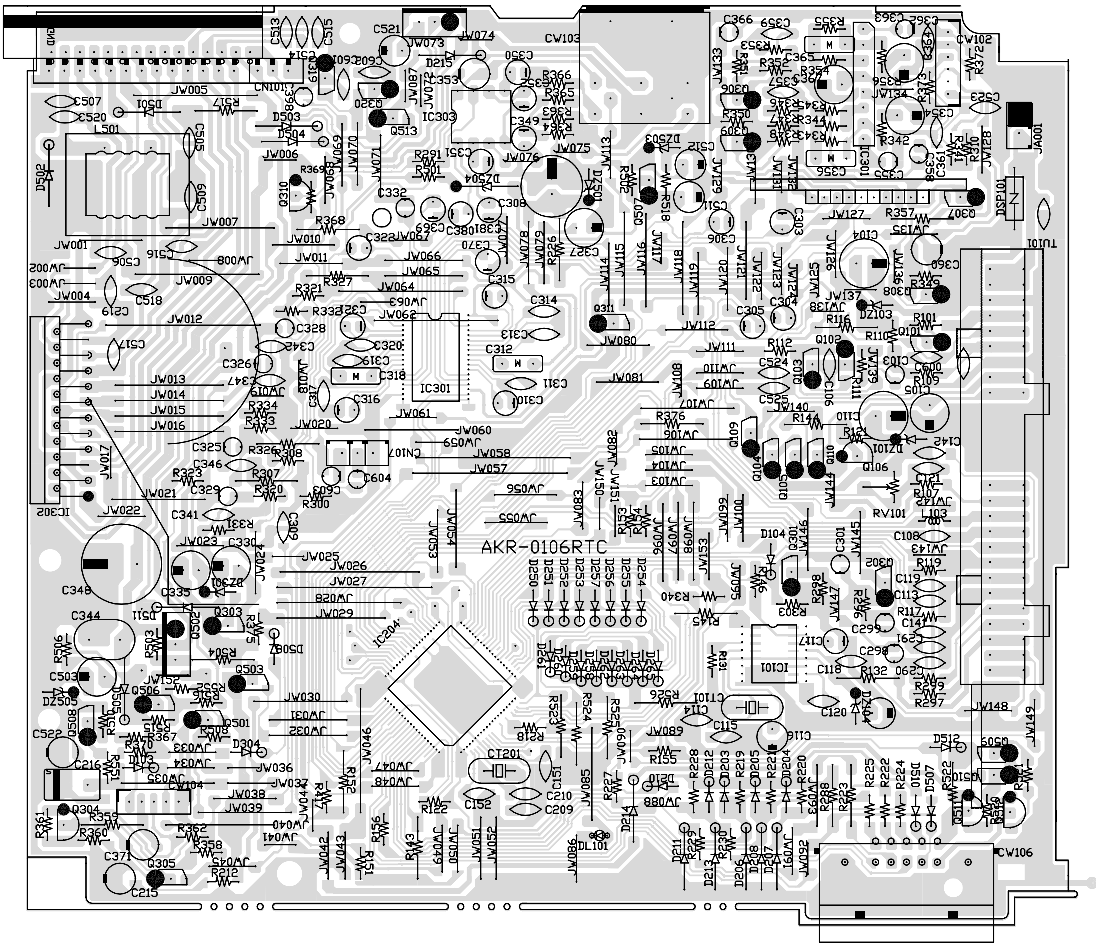


OPTION
RDS Function
CDC Function
CAT-7-NC
RDSDEMODULATOR
SAA6579T
(RDS DEMODULATOR)
BLOCK DIAGRAM
FRONT PCB
LC75854
IC204
UPD178016GC
ISO 26PIN
AUTO ANT
DIMMER
BACK UP(+12)
IGN
ACC
LEFT
GND
RIGHT
LINE-OUT
TDA8571J
FRONT RIGHT
FRONT LEFT
REAR RIGHT
REAR LEFT
IC304
LA3161
IC301
LC75371M
ELECTRO VR
8V 60MA
VDD(5V)
WIRED REMOCON
CDC DATA
CDC ON
FWD IN
TAPE IN
FF IN
RADIO
TAPE
MUTE
DIAGNOSTIC

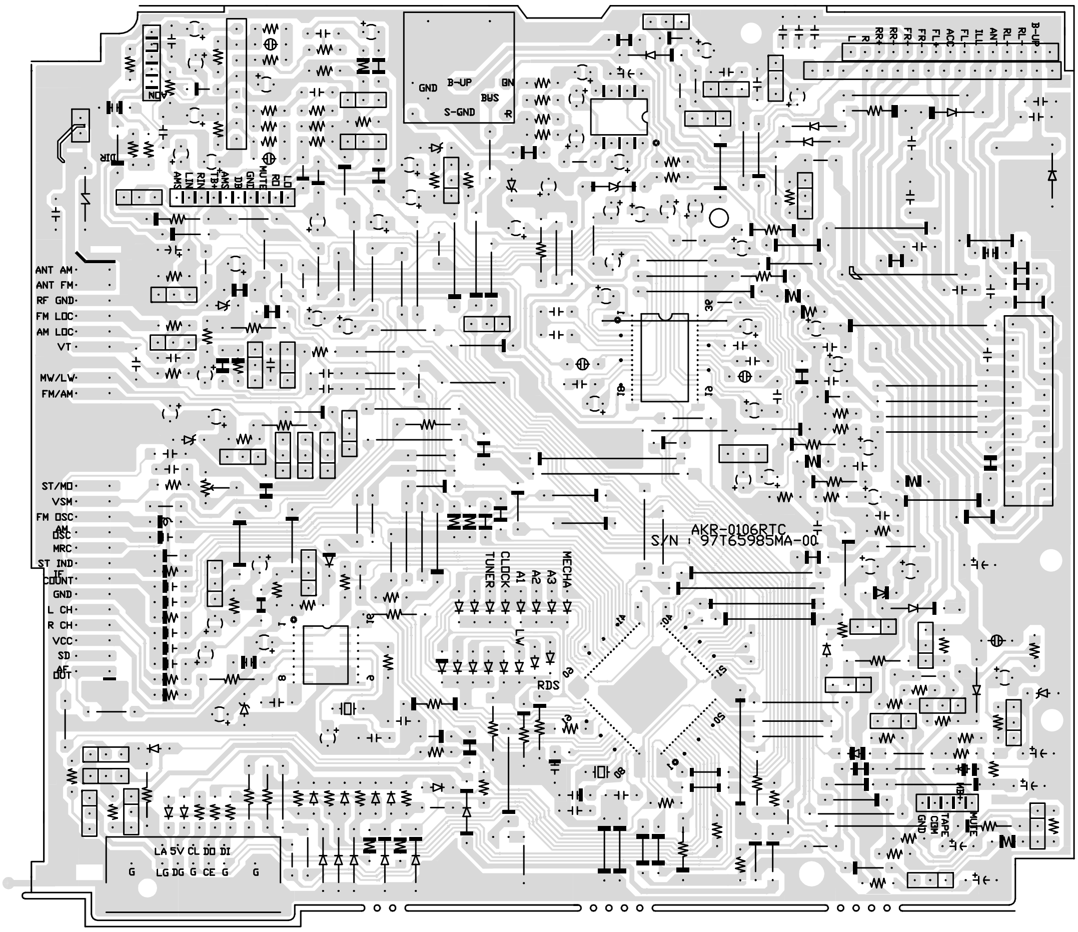
6. PARTS LOCATION ON P.C. BOARD

6-1. PCB MAIN

PART SIDE

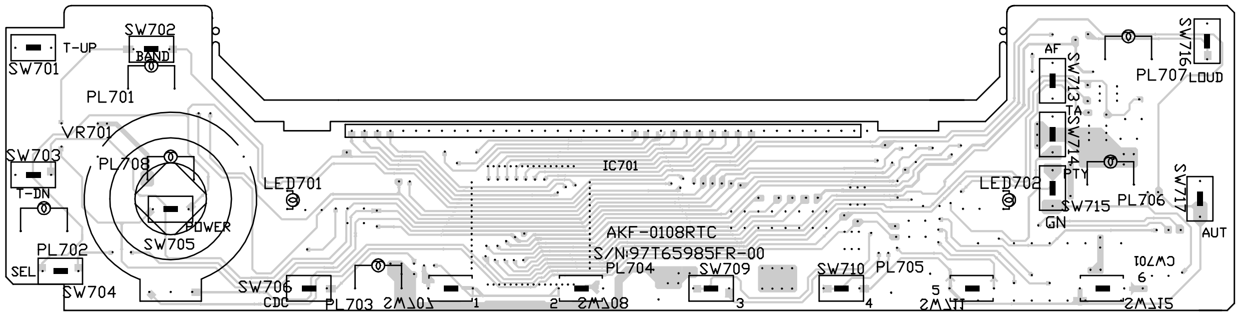


BOTTOM SIDE

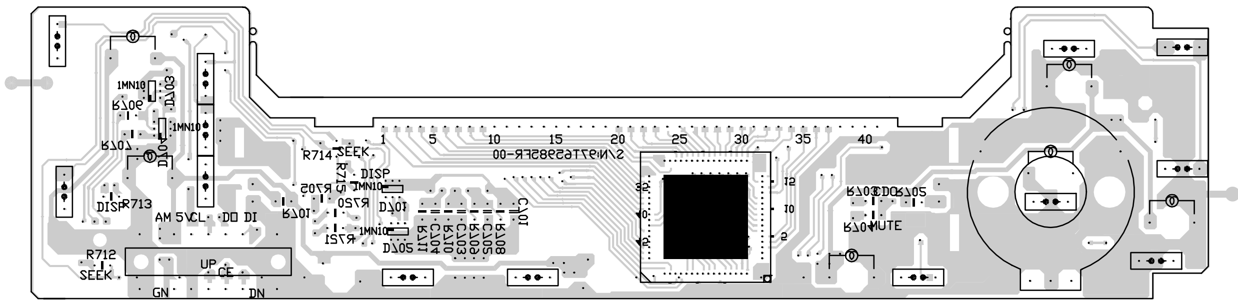


6-2. PCB FRONT

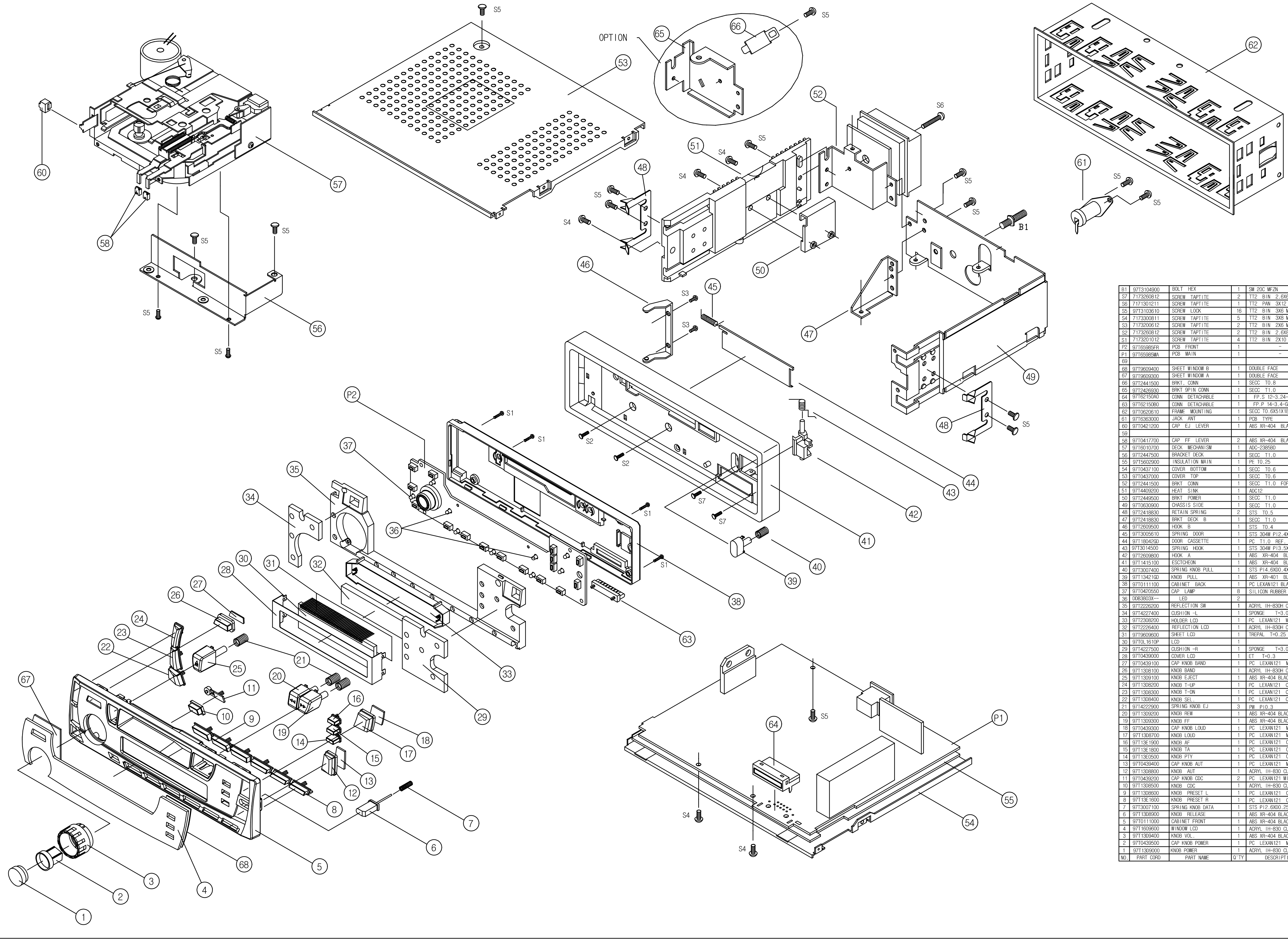
PART SIDE



BOTTOM SIDE



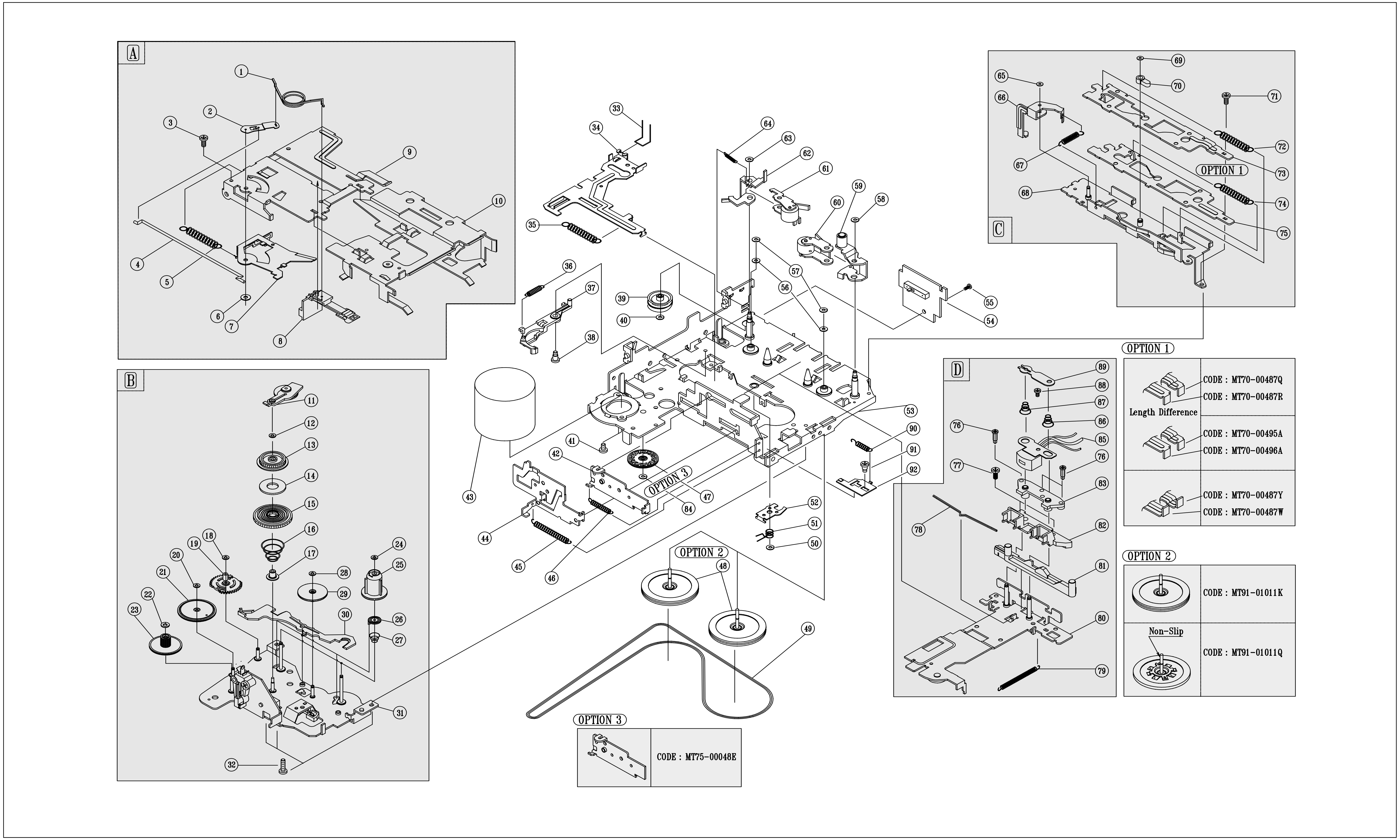
7. OVERALL EXPLODED VIEW & PARTS LIST



B1	97T3104900	BOLT HEX	1	SM 20C MFZN	
S7	7173260812	SCREW TAPTITE	2	TT2 BIN 2.6X6 BK	
S6	7171301211	SCREW TAPTITE	1	TT2 PAN 3X12 MFZN	
S5	97T3103610	SCREW LOCK	16	TT2 BIN 3X6 MFZN W/LOCK	
S4	7173300811	SCREW TAPTITE	5	TT2 BIN 3X8 MFZN	
S3	7173200612	SCREW TAPTITE	2	TT2 BIN 2X6 MFZN BK	
S2	7173260812	SCREW TAPTITE	2	TT2 BIN 2.6X8 BK	
S1	7173201012	SCREW TAPTITE	4	TT2 BIN 2X10 BK	
P2	97T65985FR	PCB FRONT	1	-	
P1	97T65985MA	PCB MAIN	1	-	
69					
68	97T9609400	SHEET WINDOW B	1	DOUBLE FACE	
67	97T9609300	SHEET WINDOW A	1	DOUBLE FACE	
66	97T2441500	BRKT, CONN	1	SECC T0.8	OPTION
65	97T2426930	BRKT 9PIN CONN	1	SECC T1.0	
64	97T62150A0	CONN DETACHABLE	1	FP.S 12-3.24-GG	
63	97T62150B0	CONN DETACHABLE	1	FP.P 14-3.4-GG	
62	97T0620610	FRAME MOUNTING	1	SECC T0.6X51X180.5X70	
61	97T6363000	JACK ANT	1	PCB TYPE	
60	97T0421200	CAP EJ LEVER	1	ABS XR-404 BLACK	
59					
58	97T0417700	CAP FF LEVER	2	ABS XR-404 BLACK	
57	97T6010700	DECK MECHANISM	1	ADC-2385BD	
56	97T2447500	BRACKET DECK	1	SECC T1.0	
55	97T5602900	INSULATION MAIN	1	PE T0.25	
54	97T0437100	COVER BOTTOM	1	SECC T0.6	
53	97T0437000	COVER TOP	1	SECC T0.6	
52	97T2441500	BRKT CONN	1	SECC T1.0 FOR ISO CONN	
51	97T4409200	HEAT SINK	1	ADC12	
50	97T2449500	BRKT POWER	1	SECC T1.0	
49	97T0630900	CHASSIS SIDE	1	SECC T1.0	
48	97T2418830	RETAIN SPRING	2	STS T0.5	
47	97T2418830	BRKT DECK B	1	SECC T1.0	
46	97T2609500	HOOK B	1	STS T0.4	
45	97T3005610	SPRING DOOR	1	STS 304W PI2.4XD0.25X7	
44	97T18042GD	DOOR CASSETTE	1	PC T1.0 REF. DESIGN	
43	97T3014500	SPRING HOOK	1	STS 304W PI3.5XD0.55	
42	97T2609800	HOOK A	1	ABS XR-404 BLACK	
41	97T1415100	ESCTCHEON	1	ABS XR-404 BLACK	
40	97T3007400	SPRING KNOB PULL	1	STS PI4.6XD0.4X17	
39	97T13421GD	KNOB PULL	1	ABS XR-401 BLACK	
38	97T0111100	CABINET BACK	1	PC LEXAN121 BLACK	
37	97T0420550	CAP LAMP	8	SILICON RUBBER GREEN	
36	DDB3803X--	LED	2		
35	97T2226200	REFLECTION SW	1	ACRYL IH-830H CLEAR	
34	97T4227400	CUSHION -L	1	SPONGE T=3.0	
33	97T2308200	HOLDER LCD	1	PC LEXAN121 WHITE	
32	97T2226400	REFLECTION LCD	1	ACRYL IH-830H CLEAR	
31	97T9609600	SHEET LCD	1	TREPAL T=0.25	
30	97T0L1610P	LCD	1		
29	97T4227500	CUSHION -R	1	SPONGE T=3.0	
28	97T0439000	COVER LCD	1	ET T=0.3	
27	97T0439100	CAP KNOB BAND	1	PC LEXAN121 MILKY	
26	97T13D8100	KNOB BAND	1	ACRYL IH-830H CLEAR	
25	97T13D9100	KNOB EJECT	1	ABS XR-404 BLACK	
24	97T13D8200	KNOB T-UP	1	PC LEXAN121 CLEAR	
23	97T13D8300	KNOB T-DN	1	PC LEXAN121 CLEAR	
22	97T13D8400	KNOB SEL.	1	PC LEXAN121 CLEAR	
21	97T4222900	SPRING KNOB EJ	3	PW PI0.3	
20	97T13D9200	KNOB REW	1	ABS XR-404 BLACK	
19	97T13D9300	KNOB FF	1	ABS XR-404 BLACK	
18	97T0439300	CAP KNOB LOUD	1	PC LEXAN121 MILKY	
17	97T13D8700	KNOB LOUD	1	PC LEXAN121 MILKY	
16	97T13E1900	KNOB AF	1	PC LEXAN121 CLEAR	
15	97T13E1800	KNOB TA	1	PC LEXAN121 CLEAR	
14	97T13E0500	KNOB PTY	1	PC LEXAN121 CLEAR	
13	97T0439400	CAP KNOB AUT	1	PC LEXAN121 MILKY	
12	97T13D8800	KNOB AUT	1	ACRYL IH-830 CLEAR	
11	97T0439200	CAP KNOB CDC	2	PC LEXAN121 MILKY	
10	97T13D8500	KNOB CDC	1	ACRYL IH-830 CLEAR	
9	97T13D8600	KNOB PRESET L	1	PC LEXAN121 CLEAR	
8	97T13E1600	KNOB PRESET R	1	PC LEXAN121 CLEAR	
7	97T3007100	SPRING KNOB DATA	1	STS PI2.6XD0.25X12.5	
6	97T13D8900	KNOB RELEASE	1	ABS XR-404 BLACK	
5	97T0111000	CABINET FRONT	1	ABS XR-404 BLACK	
4	97T1609600	WINDOW LCD	1	ACRYL IH-830 CLEAR	
3	97T13D9400	KNOB VOL.	1	ABS XR-404 BLACK	
2	97T0439500	CAP KNOB POWER	1	PC LEXAN121 MILKY	
1	97T13D9000	KNOB POWER	1	ACRYL IH-830 CLEAR	
NO.	PART CORD	PART NAME	Q'TY	DESCRIPTION	REMARK

8. DECK MECHANISM EXPLODED VIEW & PARTS LIST

for AKR-1010 & AKR-0106 Series



8-2. PARTS LIST for ADC-2385

No	PART NAME	PART LIST	Q'TY	No	PART NAME	PART LIST	Q'TY
A	A ASS'Y-CASE	MT90-24010K	1	36	SPRING ARM LOCK	6107-000249	1
1	SPRING-F	6107-000323	1	37	ARM LOCK	MT72-00380G	1
2	ASS'Y CASE L/P	MT75-00047X	1	38	SCREW ARM LOCK	6009-000333	1
3	SCREW (M2*4)	6003-000305	1	39	PULLEY CENTER	MT72-00104A	1
4	SPRING L/P	6107-000369	1	40	WASHER(1.2*3*0.25T)	6031-000431	1
5	SPRING E/P	6107-000339	1	41	SCREW(M2*2.5)	6001-001048	2
6	WASHER(1.6*3.5*0.25T)	6031-000446	1	42	ASS'Y -EJECT A C/K	MT75-00047U	1
7	CASE E/P	MT70-00439B	1	43	ASS'Y MOTOR	MT90-11010N	1
8	ARM-C	MT72-00027A	1	44	LEVER EJECT-B	MT70-00438R	1
9	CASE CASSETTE	MT70-00076A	1	45	SPRING EJECT-B	6107-001023	1
10	HOLDER-C	MT70-00438T	1	46	SPRING EJECT-A	6107-001022	1
B	ASS'Y-CHASSIS REEL	MT90-23020A	1	47	GEAR 18.6B	MT66-00016A	1
11	ASS'Y ARM PLAY	MT90-11011A	1	48	ASS'Y FLYWHEEL(option)	MT91-01011B	2
12	WASHER(1*3.2*0.25T)	6031-001032	1	49	BELT(120.2)	6602-000106	1
13	GEAR CLUTCH 1	MT72-00331N	1	50	WASHER(2.1*5*0.5T)	6031-001082	1
14	FELT CLUTCH	MT74-00091C	1	51	SPRING LEVER PLAY	6107-001028	1
15	GEAR CLUTCH 2	MT72-00331P	1	52	LEVER PLAY	MT70-00438W	1
16	SPRING CLUTCH	6107-001021	1	53	ASS'Y CHASSIS MAIN	MT90-02013J	1
17	CLUTCH BODY	MT72-00046A	1	54	ASS'Y PCB HEAD	MT91-21013R	1
18	WASHER(1.2*3.5*0.5T)	6031-000575	1	55	SCREW(2*3.7)	6003-000322	1
19	GEAR CAM	MT72-00331M	1	56	WASHER(1.9*3.2*0.25)	6031-000464	2
20	WASHER(1.2*3*0.25T)	6031-000431	1	57	E-RING(∅1.5)	6044-000272	2
21	GEAR SENSOR	MT66-00025A	1	58	WASHER(2.1*4*0.4T)	6031-000486	1
22	WASHER(1.2*3*0.25T)	6031-000431	1	59	ASS'Y ARM C/R	MT90-11010P	1
23	GEAR 19.6B	MT66-00017A	1	60	ASS'Y PINCH R	MT90-15010E	1
24	WASHER(1.2*3.2*0.35T)	6031-000433	2	61	ASS'Y PINCH F	MT90-15010D	1
25	GEAR REEL	MT72-00379D	2	62	LEVER PRO	MT70-00438P	1
26	SENSOR PULLEY	MT72-00126A	2	63	WASHER(2.1*4*0.4T)	6031-000486	1
27	SPRING B/T	6107-000191	2	64	SPRING LEVER PRO	6107-001026	1
28	WASHER(1.2*3*0.25T)	6031-000431	1	C	ASS'Y BASE FF/REW	MT75-00050A	1
29	GEAR PLAY-B	MT72-00379C	1	65	WASHER(1.2*3.2*0.35T)	6031-000430	1
30	ARM SENSOR	MT72-00331G	1	66	LEVER LOCK	MT70-00438Y	1
31	ASS'Y CHASSIS REEL	MT75-00047K	1	67	SPRING LEVER LOCK	6107-001048	1
32	SCREW(M2*4)	6003-000305	3	68	ASS'Y BASE FR C/K	MT75-00047V	1
33	SPRING SWITCH	MT61-00002A	1	69	WASHER(2.1*5*0.5T)	6031-001082	1
34	LEVER SWITCH	MT70-00438Z	1	70	STOPPER LEVER	MT72-00379E	1
35	SPRING TRIGGER	6107-001061	1	71	SCREW(M2*4)	6003-000305	1

No	PART NAME	PART LIST	Q'TY	PART NAME	PART LIST	Q'TY
72	SPRING FF/REW	6107-001054	1	**OPTION 1**		
73	LEVER FF	MT70-00487K	1	ASS'Y BASE FF/REW	MT75-00051A	1
74	SPRING FF/REW	6107-001054	1	LEVER FF	MT70-00487Q	1
75	LEVER REWIND	MT70-00487L	1	LEVER REWIND	MT70-00487R	1
D	ASS'Y BASE HEAD	MT91-02011K	1	ASS'Y BASE FF/REW	MT75-00052A	1
76	SCREW AZIMUTH	6009-000334	1	LEVER FF	MT70-00495A	1
77	SCREW (M2*5.5)	6003-000295	2	LEVER REWIND	MT70-00496A	1
78	SPRING PINCH	6107-000366	1	ASS'Y BASE FF/REW	MT75-00053A	1
79	SPRING BASE HEAD	6107-001049	1	LEVER FF	MT70-00487Y	1
80	ASS'Y BASE HEAD C/K	MT90-02013H	1	LEVER REWIND	MT70-00487W	1
81	PLATE HEAD-B	MT72-00331K	1	**OPTION 2**		
82	HOLDER H/B	MT72-00056A	1	ASS'Y FLYWHEEL (D-CAST)	MT91-01011K	1
83	PLATE HEAD-A	MT72-00079A	1			1
84	SCREW AZIMUTH	6009-000334	1	ASS'Y FLYWHEEL (N/S S/F)	MT91-01011Q	1
85	HEAD(TC860CP)	MT59-00041L	1			1
86	SPRING AZIMUTH-R	6107-000345	1	**OPTION 3**		
87	SPRING AZIMUTH-F	6107-000201	1	ASS'Y -EJECT A C/K		1
88	SCREW(M2*3)	6002-001011	1	LEVER EJECT-A	MT75-00048E	1
89	STOPPER AZIMUTH	MT70-00438A	1			
90	SPRING EJECT	MT61-00007A	1			
91	SCREW(M1.7*2)	MT60-00025A	1			
92	EJECT STOPPER	MT70-00487U	1			

9. PARTS LIST

CAUTION Ⓡ is a recommendable part for essential stock.

9-1. MAIN SECTION

LOCATION	CODE	NAME	DESCRIPTION
Ⓡ DL101	DLT4H11G41	LED	LT4H11G-41 (RED)
IC101	1SAA6579T-	IC AUDIO	SAA6579T
IC204	176S8016X1	IC CHIP CUSTOM	MPP178016AGC-563-3BP
IC301	1LC75371M-	IC CHIP EVR	LC75371M MFP36S
IC302	1TDA8571J-	IC POWER	TDA8571J-Y
IC303	1BA3121---	IC ISOLATION	BA-3121
IC304	1LA3161---	IC AUDIO TAPE EQ	LA-3161
Ⓡ IC305	1K1A7808P1	IC REGULATOR	KIA7808PI
Ⓡ L501	5LC301PA18	COIL CHOKE	37X1X5.2 300UH P EI-19MM
Ⓡ RV101	RV1417504-	R SEMI FIXED	H500K-5X5-6N-PC-BS
Ⓡ B001	97T65985MA	PCB MAIN	197X330XT1.6 / 2
Ⓡ CT101	5XJZ4R332D	CRYSTAL QUARTZ	HC-49/S 4.332MHZ 25PPM F
Ⓡ CT201	5XJZ4R500E	CRYSTAL QUARTZ	HC-49/S 4.5MHZ 30PPM F
DZ101	DKTZJ10B--	DIODE ZENER	MTZJ 10B 26MM
DZ103	DKTZJ9R1B-	DIODE ZENER	MTZJ 9R1B 26MM
DZ104	DKTZJ5R1A-	DIODE ZENER	MTZJ 5R1B 26MM
DZ301	DKTZJ5R6B-	DIODE ZENER	MTZJ 5R6B 26MM
DZ501	DKTZJ9R1B-	DIODE ZENER	MTZJ 9R1B 26MM
DZ503	DKTZJ5R6B-	DIODE ZENER	MTZJ 5R6B 26MM
DZ504	DKTZJ5R6B-	DIODE ZENER	MTZJ 5R6B 26MM
DZ505	DKTZJ6R8B-	DIODE ZENER	MTZJ 6R8B 26MM
D103	DKSS133---	DIODE	1SS133 AUTO 26MM
D104	DKSS133---	DIODE	1SS133 AUTO 26MM
D203	DKSS133---	DIODE	1SS133 AUTO 26MM
D204	DKSS133---	DIODE	1SS133 AUTO 26MM
D205	DKSS133---	DIODE	1SS133 AUTO 26MM
D206	DKN4148---	DIODE	KN4148 AUTO 26MM
D207	DKN4148---	DIODE	KN4148 AUTO 26MM
D208	DKN4148---	DIODE	KN4148 AUTO 26MM
D210	DKSS133---	DIODE	1SS133 AUTO 26MM
D211	DKN4148---	DIODE	KN4148 AUTO 26MM
D212	DKSS133---	DIODE	1SS133 AUTO 26MM
D213	DKN4148---	DIODE	KN4148 AUTO 26MM
D214	DKN4004A--	DIODE	KN4004A AUTO 26MM
D215	DKN4148---	DIODE	KN4148 AUTO 26MM
D250	DKSS133---	DIODE	1SS133 AUTO 26MM

LOCATION	CODE	NAME	DESCRIPTION
D259	DKSS133---	DIODE	1SS133 AUTO 26MM
D260	DKSS133---	DIODE	1SS133 AUTO 26MM
D304	DKSS133---	DIODE	1SS133 AUTO 26MM
D501	DKN4004A--	DIODE	KN4004A AUTO 26MM
D502	DKN4004A--	DIODE	KN4004A AUTO 26MM
D503	DKN4004A--	DIODE	KN4004A AUTO 26MM
D504	DKN4004A--	DIODE	KN4004A AUTO 26MM
D505	DKN4004A--	DIODE	KN4004A AUTO 26MM
D507	DKSS133---	DIODE	1SS133 AUTO 26MM
D508	DKSS133---	DIODE	1SS133 AUTO 26MM
D510	DKSS133---	DIODE	1SS133 AUTO 26MM
D511	DKN4004A--	DIODE	KN4004A AUTO 26MM
R L103	5LL568K02K	COIL INDUCTOR	0.56UH K 02 TA 26MM
Q301	TZDTC323TS	TR	DTC323TSA SPT
Q302	TZDTC323TS	TR	DTC323TSA SPT
Q303	TZDTC323TS	TR	DTC323TSA SPT
Q304	TZTA1273Y-	TR	KTA1273Y (966Y)
Q305	TZRC102M--	TR	KRC102M (KEC)
Q306	TZRC111M--	TR	KRC111M
Q309	TZRC111M--	TR	KRC111M
Q310	TZTA1273Y-	TR	KTA1273Y (966Y)
Q311	TZRC102M--	TR	KRC102M (KEC)
Q319	TZDTC323TS	TR	DTC323TSA SPT
Q320	TZDTC323TS	TR	DTC323TSA SPT
Q503	TZRC102M--	TR	KRC102M (KEC)
Q507	TZRC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q508	TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q513	TZRC102M--	TR	KRC102M (KEC)
R TUD01	PNFCJMJV00	PCB FM 1-CHIP AS AUT	CAT-7-NC

9-2. FRONT SECTION

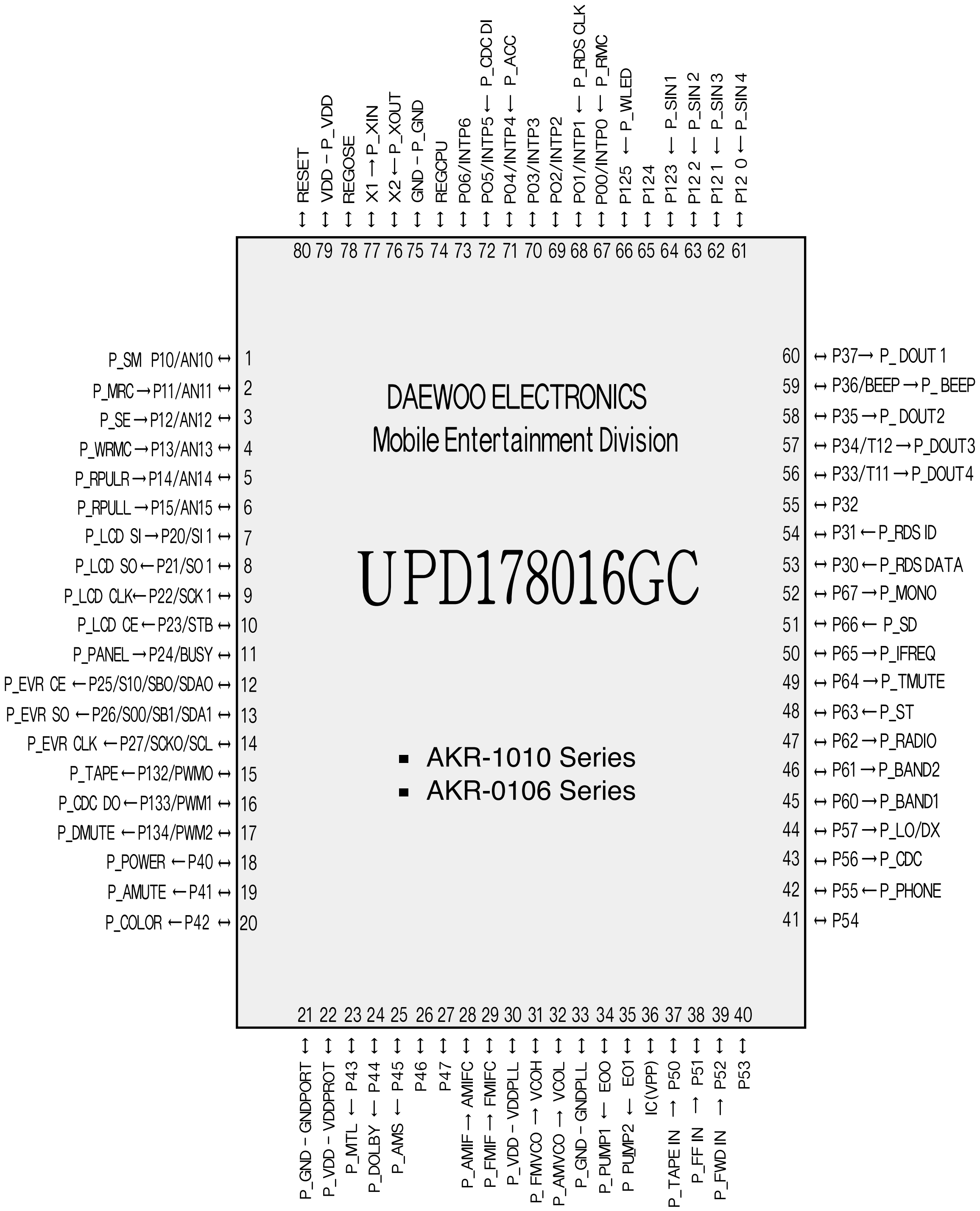
LOCATION	CODE	NAME	DESCRIPTION
IC701	1LC75854--	IC DRIVER (LCD)	LC75854 or HL14104
Ⓡ LD701	DDB3803X--	LED	DB3803X (BLUE)
Ⓡ LD702	DDB3803X--	LED	DB3803X (BLUE)
L701	97T0L1610P	LCD	IS-09053P
PL701	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL702	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL703	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL704	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL705	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL706	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL707	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
PL708	97T82L1W86	LAMP PILOT	8V 60MA D3.05 0.12
SW707	5S52643CL1	SW TACT	1C-1P SKMA 10918A 260G
SW708	5S52643CL1	SW TACT	1C-1P SKMA 10918A 260G
SW711	5S52643CL1	SW TACT	1C-1P SKMA 10918A 260G
SW712	5S52643CL1	SW TACT	1C-1P SKMA 10918A 260G
Ⓡ VR701	5V3503A70A	VR ENCODER	SRGP 200 200
SW701	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW702	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW703	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW704	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW705	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW706	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW709	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW710	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW713	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW714	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW715	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW716	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW717	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G

9-3. FM ONE CHIP / ISO / EVR SECTION

LOCATION	CODE	NAME	DESCRIPTION
Ⓡ L02	5LA109KA22	COIL ANT	0.5X3.4X3.5+3.0 R/NA
Ⓡ L06	5LL100K02K	COIL INDUCTOR	10UH K 02 TA 26MM
Ⓡ L08	5LL109K02K	COIL INDUCTOR	1UH K 02 TA 26MM
Ⓡ L01	5LL479K02K	COIL INDUCTOR	4.7UH K 02 TA 26MM
Ⓡ L04	5L0109KA23	COIL OSC	0.5X3.0X2.5+3.0 R/NA
Ⓡ L07	5LT109KA21	COIL TRAP	0.3X1.8X7 1/2 L/NA
D01, D20, D81, D82	DKSS133---	DIODE	1SS133 AUTO 26MM
D02, D03	DKDS266--B	DIODE CHIP	KDS266 SOT-23 C3
D12	D1SV234--A	DIODE CHIP	1SV234
DA04	DKB0714-3-	DIODE VARICAP	AM KV0714-3
D09, D10, D11	DKV1440TLB	DIODE VARICAP	FM KV1440TLB
Q01	TFC12-----	FET	AM FC-12
Q05	T3SK231U1D	FET	FET 3SK231UID
FC04	5PCFM450AL	FILTER CERA	AHCFM2 - 450AL
FC02, FC03	5PE107MJA1	FILTER CERA	SFE10.7MJA10 RED
FC01	5PE107M3A1	FILTER CERA	SFE10.7KS3A10
CR01	5PB456A12-	FILTER MECHA	CMU2-456A12
IC01	1DBL1091--	IC	DBL1091
IC03	1LA1177---	IC RF	LA1177 FM SIP TYPE
AIF	5105AYWA35	IFT AM	5DL-C5167
FDET	5107FBKA30	IFT FM DET	7BS-C4024
FIF	5105F0RA29	IFT FM IF	5DLH-C5115
FRF	5107FBKA31	IFT FM RF	7BSF-N1025
ARF11	5105AGYA36	IFT LW RF1	5DLP-N5162
ARF21	5105ABLA37	IFT LW RF2	5DLP-N5163
ARF01	5105AWHA32	IFT MW RF1	5DL-N5165
ARF02	5105AGNA33	IFT MW RF2	5DL-N5166
LOSC	5105ABRA38	IFT OSC	5DL-N5164
AOSC	5105ARDA34	IFT OSC	5DL-N5146
RV01	RV4417103-	R SEMI FIXED	H10K - 5X5 - 6N - CC - BS
Q81	TKRC110S-B	TR CHIP	KRC110S SOT - 23
Q02	TKRC110S-B	TR CHIP	KRC111S
Q03, Q11	TKRC112S--	TR CHIP	KRC - 112S
Q04, Q12, Q13, Q82, Q83, Q84	TKTC3875GB	TR CHIP	KTC3875 - GR
Q10	TKTC3879-B	TR CHIP	KTC3879

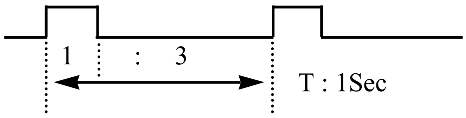
10. FUNCTION OF MICOMIC

10-1. PIN CONFIGURATION (TOP VIEW)



10-2. PIN DESCRIPTION

PIN	ASSIGN	NAME	DESCRIPTION	I/O
77 76	P_XIN P_XOUT	X1 X2	4.5 MHz CRYSTAL	I O
22 30 79 22 33 75	P_VDD P_VDD P_VDD P_GND P_GND P_GND	VDDPORT VDDPLL VDD GNDPORT GNDPLL GND	PERMANENT POWER INPUT PORT)MAX : 6.5V GROUND	
71	P_ACC	P04/INTP4	BACK UP MODE CONTROL PORT. LOW : BACK UP MODE. HIGH : OPERATING MODE.	I
18	P_POWER	P40	POWER CONTROL PORT. POWER OFF ⟶ LOW, POWER ON ⟶HIGH	O
7 8 9 10	P_LCD SI P_LCD S0 P_LCD CLK P_LCD CE	P20/SI1 P21/SO1 P22/SCK1 P23/STB	KEY & LCD DRIVER IC INTERFACE PORTS.	I O O O
12 13 14	P_EVR CE P_EVR SO P_EVR CLK	P25/SI0 P26/SO0 P27/SCK0	EVR IC INTERFACE PORTS	O O O
19	P_AMUTE	P41	AUDIO MUTE PORT, ACTIVE HIGH	O
59	P_BEEP	P36/BEEP	BEEP OUTPUT PORT. (2.08 KHz)	O
4	P_WRMC	P00/INTP0	WIRE REMOCON INPUT PORT.	I
67	P_RMC	P24/BUSY	WIRELESS REMOCON INPUT PORT.	I
11	P_PANEL	P42	DETACHABLE ON / OFF INPUT PORT. CONTACT ⟶ LOW SEPARATE ⟶ HIGH	I
20	P_COLOR		LCD BACK - LIGHTING COLOR CONTROL PORT RESET : COLOR ⟶ "LOW" TWO KEY IN : CHANGED	O

PIN	ASSIGN	NAME	DESCRIPTION	I/O
66	P_WLED	P125	WARNING LED OUTPUT PORT. ∗ OUT PUT CONDITION : PANEL OFF 	O
42	P_PHONE	P55	TELEPHONE MUTE (ACTIVE LOW)	I
3	P-SE	P12/AN12	SE KEY INPURT PORT (ACTIVE LOW)	I
64 63 62 61	P-SIN1 P-SIN2 P-SIN3 P-SIN4	P123 P122 P121 P120	OPTION DIODE MATRIX INPUT PORT.	I I I I
60 58 57 56	P_DOUT1 P_DOUT2 P_DOUT3 P_DOUT4	P37 P35 P34/T12 P33/T11	OPTION DIODE MATRIX OUTPUT PORT.	O O O O
47	P_RADIO	P62	RADIO MODE CONTROL PORT	O
45 46	P_BAND1 P_BAND2	P60 P61	BAND SELECT PORT (TUNER MODE) RESET FM MW LW BAND1 : 0 1 0 0 BAND2 : 0 0 1 0	O O
49	P_TMUTE	P64	MUTE OUTPUT AT AF CHECKING (ACTIVE HIGH)	O
48	P_ST	P63	STEREO INPUT PORT. (ACTIVE LOW)	I
51	P_SD	P66	SIGNAL DETECTION PORT. (ACTIVE HIGH)	I
1	P_SM	P10/AN10	SIGNAL METER INPUT PORT. ∗ RANGE : SEEK : LOCAL : SD ACTIVE CHECK DX : SD ACTIVE CHECK AF --▶ AF CHECK STOP VOLTAGE 2.2 V	I

10-3. PIN DESCRIPTION

PIN	ASSIGN	NAME	DESCRIPTION	I/O
31	P_FMVCO	VCOH	FM VCO INPUT PORT. INPUT RANGE : 0.07 ~ 1.5 Vrms	I
32	P_AMVCO	VCOL	AM VCO INPUT PORT. INPUT RANGE : 0.07 ~ 1.5 Vrms	I
29	P_FMIF	FMIFC	FM IF COUNT INPUT PORT. RANGE:10.7 MHz ±30KHz ,Vpp = 0.07~1.5 Vrms	I
28	P_AMIF	AMIFC	AM IF COUNT INPUT PORT. INPUT RANGE : 450 KHz ±1KHz (AM) 450 KHz ±0.37 KHz (LM) Vpp = 0.07 ~ 1.5 Vrms	I
50	P_IFREQ	P65	IF REQUEST PORT. * TUNING : HIGH OUTPUT	O
44	P_LO/DX	P57	LOCAL MODE → HIGH ☐ DX MODE → LOW	O
52	P_MONO	P67	(RADIO MODE) MONO MODE → HIGH STREO MODE → LOW	O
34 35	P_PUMP1 P_PUMP2	EO0 EO1	PLL ERROR OUT1 PORT. PLL ERROR OUT2 PORT.	O O
53 54 68	P_RDS DATA P_RDS ID P_RDS CLK	P30 P31 P01/INTP1	RDS DATA INPUT PORT.	I I I
2	P_MRC	P11/ANI1	MULTI-PATH INPUT PORT. * MULTI-PATH : 0.6 ~ 0.9 V	I
43	P_CDC	P56	CDC MODE ON OUTPUT PORT. ACTIVE HIGH	O
72 16	P_CDC DI P_CDC DO	P05/INTP5 P133/PWM1	CDC DATA COMMUNICATION PORT.	I O

PIN	ASSIGN	NAME	DESCRIPTION	I/O
15	P_TAPE	P132/PWM0	TAPE MODE OUTPUT PORT.	O
37	P_TAPE IN	P50	TAPE CASSETTE CONDITION CHECK PORT ∗ LOW : EJECT CONDITION ∗ HIGH : LOADING CONDITION	I
39	P_FWD IN	P52	TAPE FWD/RVS PLAY CONDITION INPUT PORT ∗ RVS : HIGH FWD : LOW	I
38	P_FF IN	P51	TAPE PLAY/FF CONDITION INPUT PORT ∗ PLAY : LOW FF : HIGH	I
25		P45		O
24	P_DOLBY	P44	DOLBY MODE (ACTIVE HIGH)	O
23	P_MTL	P43	METAL ON : HIGH, METAL OFF : LOW OUTPUT.	O
17	P_DMUTE	P134/PWM2	DECK MUTE PORT.	O

● KEY MATRIX TABLE :

(B : Non RDS Function=Basic)

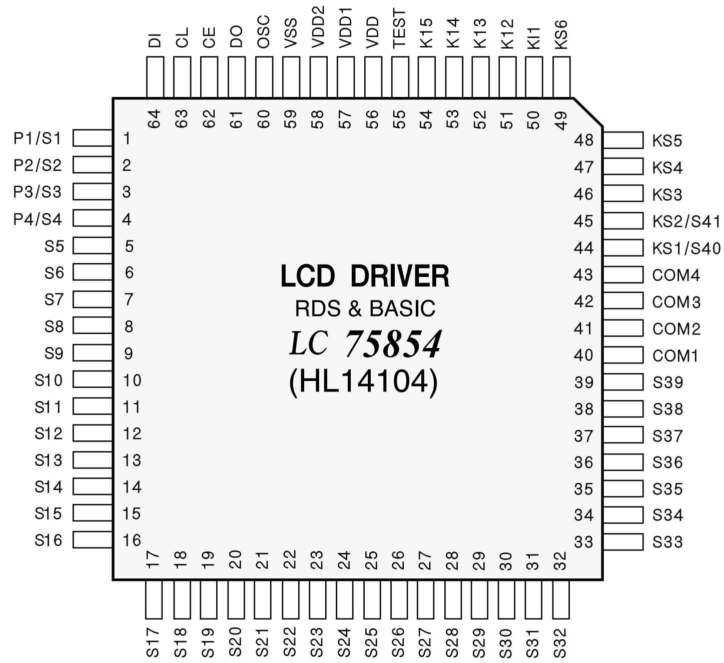
Return / Source	KI 1 (50)	KI 2 (51)	KI 3 (52)	KI 4 (53)	KI 5 (54)
KS 6 (49)	T.UP	T.DOWN	-	LOC/LOUD *(B:LOC)*	-
KS 5 (48)	M1 (TOP)	M2 (DOLBY)	M3 (METAL) (REPEAT)	TA/TA_STBY *(B:SCAN UP)*	AF/REG *(B:LOUD)*
KS 4 (47)	M4 (SHUFFLE)	M5 (DISC DOWIN)	M6 (DISC UP)	DISP/PTY *(B:DISP)*	ATP (INTRO)
KS 3 (46)	Audio UP	Audio DOWN	Audio MODE	POWER	-
KS 2 (45)	-	-	CDC PLAY/PAUSE	BAND/ LANG	MUTE
KS 1 (44)	-	-	-	-	-

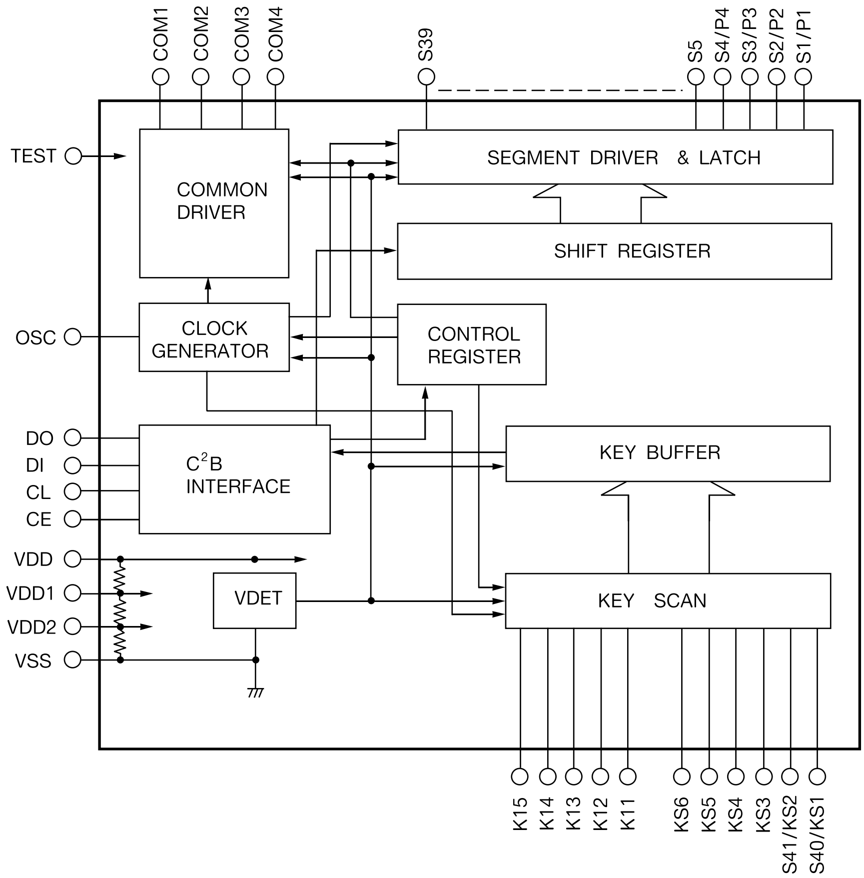
● OPTION DIODE TABLE

SOURCE / RETURN	P_DOUT 1 (P37, 60PIN)	P_DOUT 2 (P35, 60PIN)	P_DOUT 3 (P34, 57PIN)	P_DOUT 4 (P33, 56PIN)
P_SIN 1 (P123, 64PIN)	-	-	-	-
P_SIN 2 (P122, 63PIN)	FM_ONLY (D261)	EN_RDS (D260)	LW ENABLE (D259)	EN_DOLBY (0258)
P_SIN 3 (P121, 62PIN)	DIS_CLOCK (D257)	TUNER 1, 2 (D256)	DIS_FAD (D255)	MODEL1 (D254)
P_SIN 4 (P120, 61PIN)	AREA 1 (D253)	AREA 2 (D252)	AREA 3 (D251)	MODEL2 (D250)

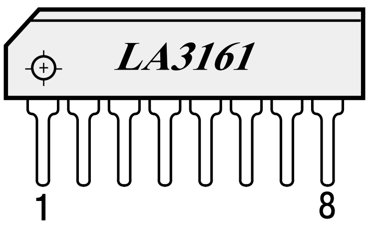
11. IC BLOCK DIAGRAM

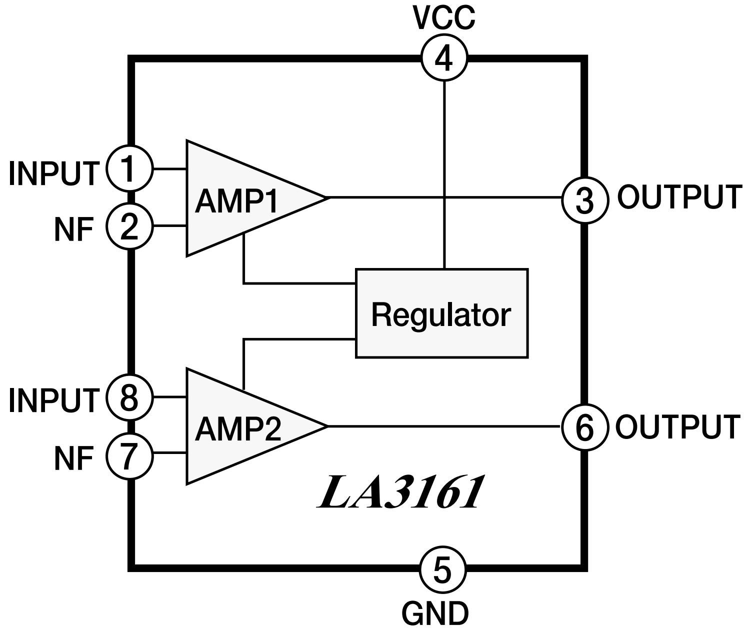
11-1. LC75854 (IC LCD DRIVER)



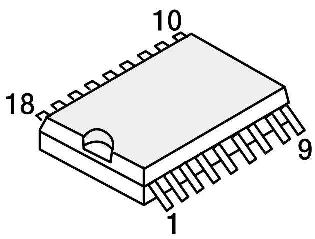


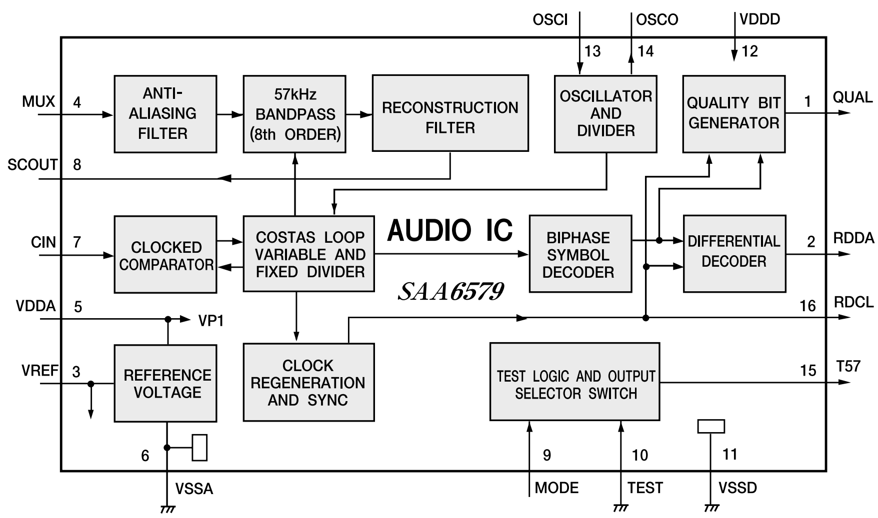
11-2. LA3161 (TAPE PRE-AMP):IC304



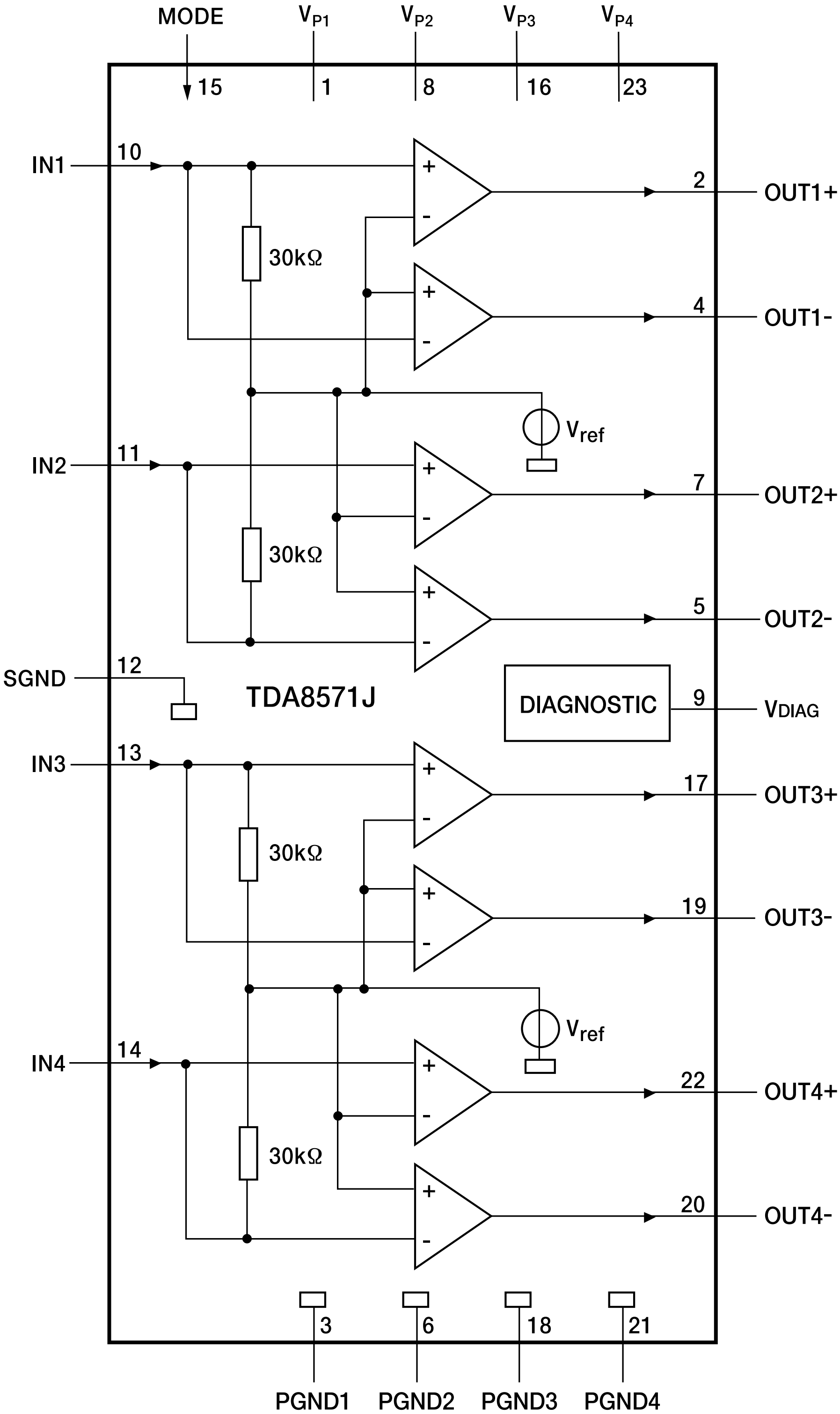


11-3. SAA6579T (IC Audio):IC101

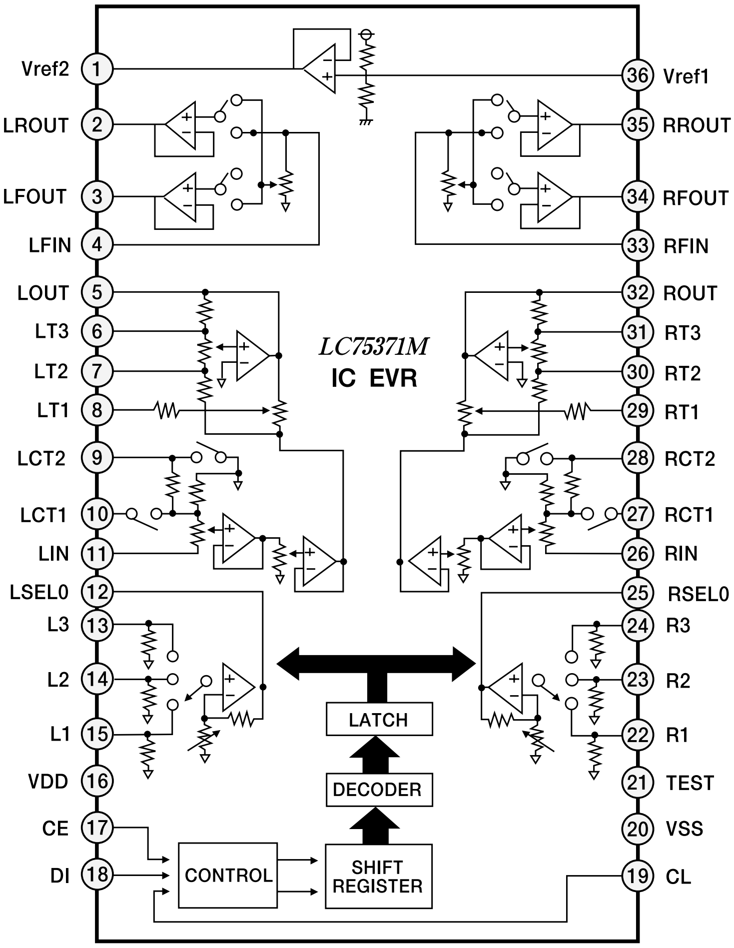




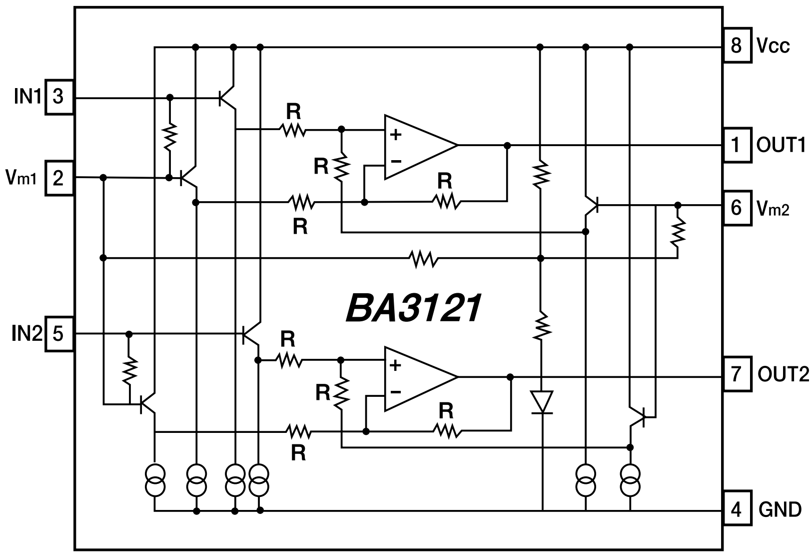
11-4. TDA8571J (IC Audio Power):IC302



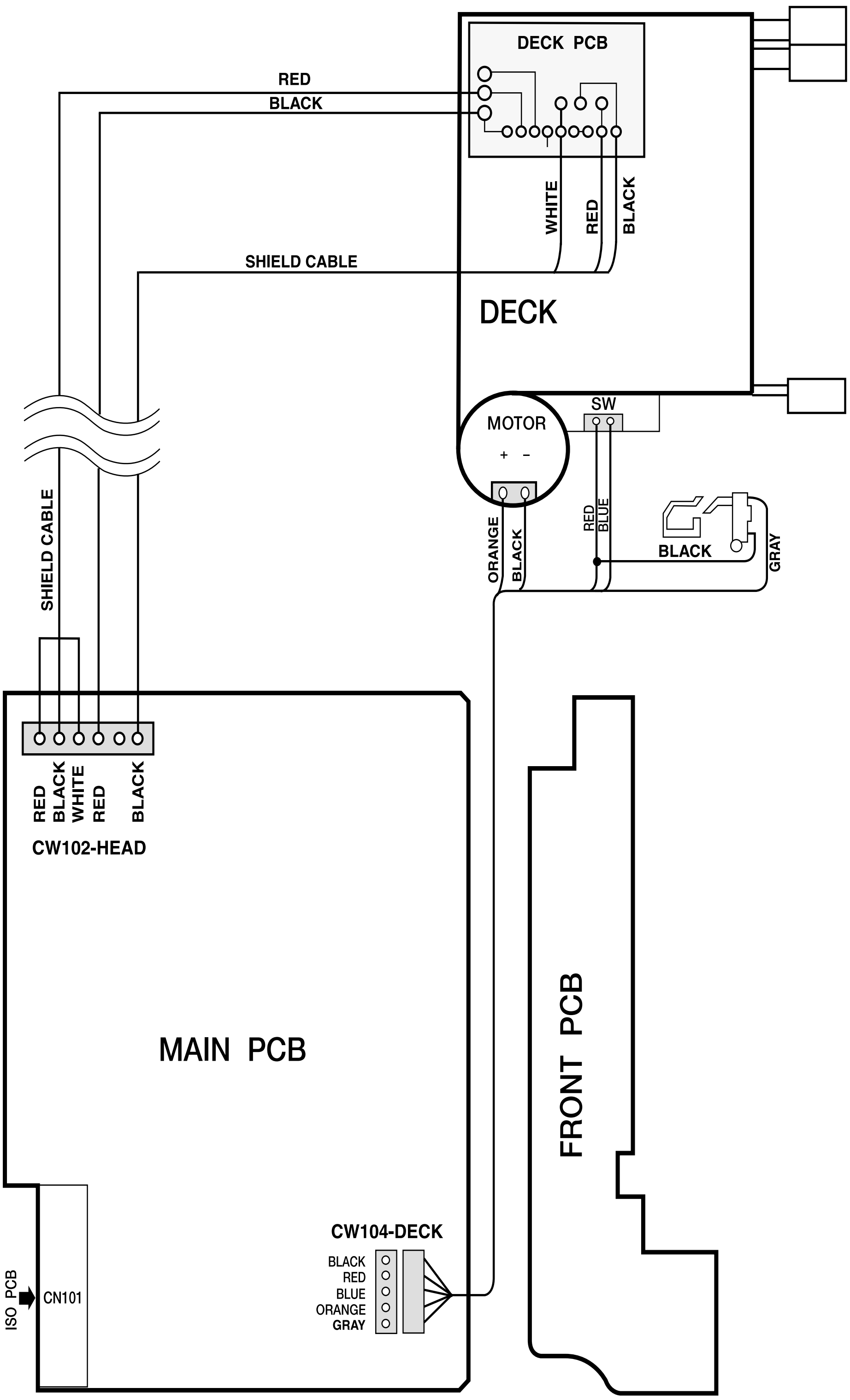
11-5. LC75371M (IC EVR) : IC301



11-6. BA3121 (IC ISOLATOR) : IC303

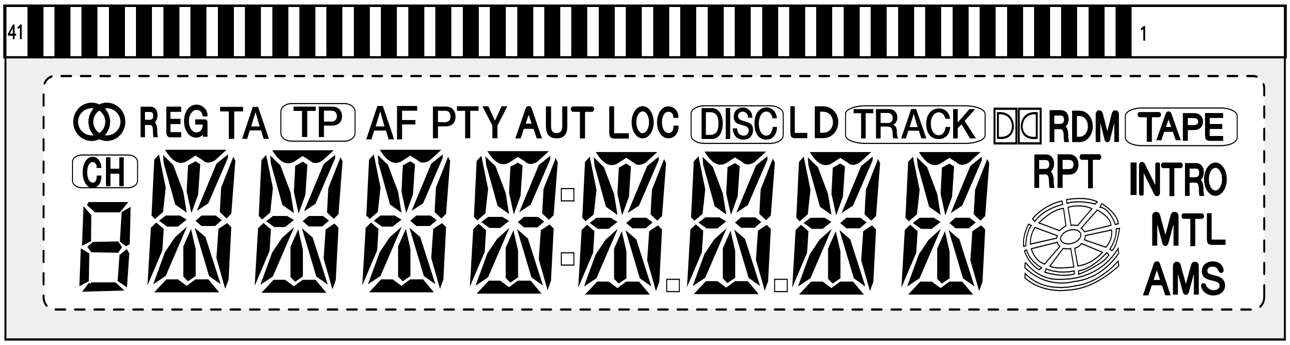


12-1. WITH ADC-2385 DECK MECHANISM



13. LIQUID CRYSTAL DISPLAY

13-1. FUTURE OF LCD



13-2. PIN DESCRIPTION

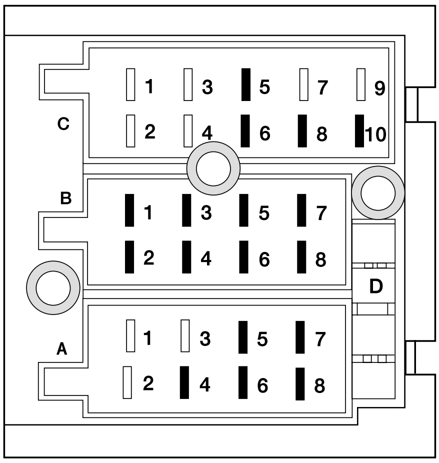
IC NO	39	38	37	36	35	34	33	31	32	6	7	8	9	10	11
LCD NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
COM1	S4	S5	S1	S6	9H	9A	S3	TRACK	8H	8A	LD	COL1	7H	7A	DISC
COM2	INTRP	RPT	---	9B	9G	90	9F	8B	8G	80	8F	7B	7G	70	7F
COM3	MTL	RDM	COL2	9I	9K	9L	8N	8I	8K	8L	8N	7I	7K	7L	7N
COM4	AMS	TAPE	---	9C	9D	9M	9E	8C	8D	8M	8E	7C	7D	7M	7E

IC NO	12	13	14	15	30	29	28	27	26	25	24	23	22	21	20
LCD NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
COM1	LOC	6H	6A	COL	AUT	5H	5A	S2	PTY	4H	4A	AF	TP	3H	3A
COM2	6B	6G	60	6F	5B	5G	50	5F	4B	4G	40	4F	3B	3G	30
COM3	6I	6K	6L	6N	5I	5K	5L	5N	4I	4K	4L	4N	3I	3K	3L
COM4	6C	6D	6M	6E	5C	5D	5M	5E	4C	4D	4M	4E	3C	3D	3M

IC NO	19	18	17	16	5	4	3	40	41	42	43
LCD NO.	31	32	33	34	35	36	37	38	39	40	40
COM1	TA	REG	2H	2A	S7	1A	CH	COM1	---	---	---
COM2	3F	2B	2G	20	2F	1B	1F	---	COM2	---	---
COM3	3N	2I	2K	2L	2N	1C	1G	---	---	COM3	---
COM4	3E	2C	2D	2M	2E	1D	1E	---	---	---	COM4

14. OUTPUT CONNECTOR DESCRIPTIONS

14-1. 26 Pin CONNECTOR



The pins in the ISO connector have the following functions (connector seen from the rear)

A. ELECTRIC CONNECTIONS

4. Back-up+12V : YELLOW
5. +12V (electric antenna) : BLUE
6. Dimmer : PINK
7. +12V supply(from ignition lock) : RED
8. Earth : BLACK

B. LOUD SPEAKER

1. +Right Rear : VIOLET
2. - Right Rear : VIOLET/BLACK
3. +Right Front : GRAY
4. - Right Front : GRAY/BLACK
5. +Left Front : WHITE
6. - Left Front : WHITE/BLACK
7. +Left Rear : GREEN
8. - Left Rear : GREEN/BLACK

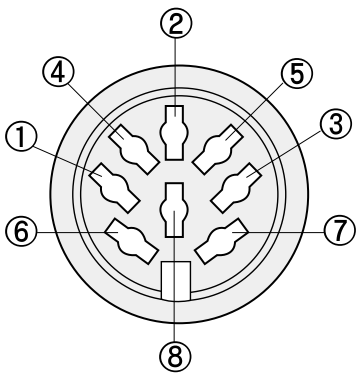
C. OTHER (OPTION)

5. EARTH
6. TRIP LINE AMPLIFIER(ACC 12V)
8. LINE-OUT(RIGHT)
10. LINE-OUT(LEFT)

D. FUSE

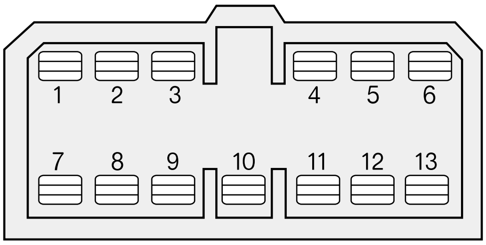
10A

14-2. 8 Pin CONNECTOR



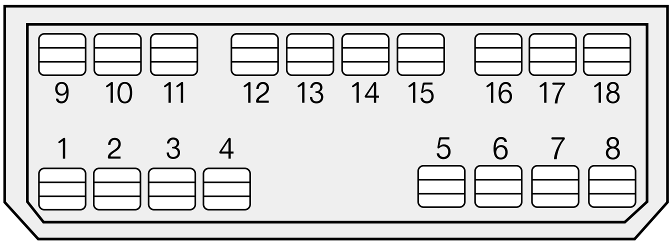
1	CDC-ON
2	BACK-UP B+
3	NO CONNECTION
4	DATA
5	GROUND
6	R-CH
7	L-CH
8	SIGNAL GROUND

14-3. 13PIN CONNECTOR



1	REAR LEFT SP(-)	8	REAR RIGHT SP(+)
2	REAR RIGHT SP(-)	9	NEGATIVE GROUND
3	AUTO ANT	10	RIGHT (ILLUMINATION)
4	ACC B(+)POWER	11	BATTERY B+(BACK-UP)
5	FRONT RIGHT SP(+)	12	FRONT RIGHT SP(-)
6	FRONT LEFT SP(+)	13	FRONT LEFT SP(-)
7	REAR LEFT SP(+)		

14-4. 18PIN CONNECTOR



1	FRONT R-CH SP(+)	7	REAR L-CH SP(+)	13	NO CONNECTION
2	REAR R-CH SP(+)	8	FRONT L-CH SP(+)	14	GROUND
3	ILLUMINATION(+)	9	FRONT R -CH SP(-)	15	NO CONNECTION
4	ACC. B(+)	10	REAR R-CH SP(-)	16	NO CONNECTION
5	BACK UP B+	11	ILLUMINATION(-)	17	REAR L-CH SP (-)
6	NO CONNECTION	12	AUTO ANT. B+	18	FRONT L-CH SP(-)

NOTE! The red cable must be connected via the car s ignition lock to prevent unwanted discharge of the battery if it is not used for longer periods of time.

DAEWOO ELECTRONICS CO., LTD
686, AHYEON-DONG MAPO-GU
SEOUL, KOREA
C.P.O. BOX 8003 SEOUL, KOREA
TELEX : DWELEC K28177-8
CABLE : “DAEWOOELEC”
E-mail : G7F00E@web.dwe.co.kr
TEL : 82-2-360-7799
FAX : 82-2-360-7877

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edited by Mc. Cem